

REMARKS

Allowable subject matter

Applicant appreciates the indication of allowability of claims 10-11 and corresponding computer-readable medium claims 25-26.

For reasons set forth below, Applicant submits that the remaining claims also recite patentable subject matter.

***Soltan* disclosure**

Soltan discloses a three-dimensional display that draws images using vector graphics methods rather than rasterizing. This is apparent from FIG. 2, which shows scan drivers **21A**, **21B** that cause scan units **22A**, **22B** to deflect light from lasers **24A**, **24B** in response to input data **19A**, **19B**. This description is consistent with the operation of a vector graphics display in which images are “painted” by deflecting a beam of light. It is inconsistent with the operation of a rasterizing display, in which images are formed by a beam that sweeps across a display surface according to a raster pattern.

Since *Soltan* describes a vector graphics display, and not a rasterizing display, it is difficult to see its relevance to claims directed to rasterizing methods.

Section 102 rejection of Claim 1

The last limitation of claim 1 recites:

“rendering selected voxels on said screen to *rasterize* said connecting segment”

As discussed above, *Soltan* discloses a vector graphics display, *not* a rasterizing display. Hence, this claim limitation cannot possibly be met by *Soltan*. For this reason alone, the section 102 rejection of claim 1 is improper and cannot be sustained.

Claim 1 further recites

“positioning a screen at a first angular position in which said screen is coplanar with an entry plane;”

In paragraph 2 of the office action, the Office draws attention to FIG. 10 as disclosing this step. However, there is no "screen" shown anywhere in FIG. 10.

The Office does not specify what structure in *Soltan* corresponds to the "screen" in claim 1. However, the helical display surface **120** (see FIG. 11) spins during operation. Applicant therefore infers that the Office regards the "screen" of claim 1 as corresponding to this helical display surface.

As best as Applicant can determine, it is geometrically impossible for a helix to be coplanar with a plane. While a plane can be coplanar with another plane, it is difficult to imagine how a helix, which is not even planar, can possibly be "coplanar" with anything. Hence, it is geometrically impossible for there to exist a "first angular position in which" the *Soltan* helical surface **120** "is coplanar with an entry plane." *Soltan* therefore fails to disclose, and indeed cannot possibly disclose, this first limitation of claim 1. For this reason alone, the section 102 rejection of claim 1 is improper.

Paragraph 2 of the office action also suggests that FIG. 10 discloses the steps:

"selecting a first voxel corresponding to an intersection of said desired line with said entry plane."

"selecting a second voxel corresponding to a projection onto said entry plane of an intersection of said desired line with an exit plane intersecting said entry plane."

As best understood from paragraph 2 of the office action, the Office considers the range rings **34, 36** to define a plane. The only possible plane that could be defined by these rings is the plane in which they are drawn. In that case, ring **34** and ring **36** would define the same plane. To the extent these rings **34, 36** define an "entry plane," then there is nothing to define the "exit plane." Conversely, to the extent rings **34, 36** define an "exit plane," there is nothing to define the "entry plane."

It is clear therefore that *Soltan* fails to teach at least three of the limitations of claim 1. Accordingly, the section 102 rejection of claim 1 is improper. Claims 2-9 and 12-14 depend on claim 1 and are therefore allowable for at least the same reasons as claim 1.

Claims 16-24 and 27-29 recite limitations similar to their corresponding method claims. Accordingly, those claims are allowable for the same reasons as set forth above.

Section 102 rejection of claim 15

Claim 15 recites the step of

“rendering, on said rotatable screen, a rasterized approximation of a line segment containing an intersection of said desired line and said rotatable screen.”

As discussed above, *Soltan* discloses a vector display, not a raster display. Hence, *Soltan* fails to disclose this claim limitation.

Summary

Now pending in this application are claims 1-30, of which claims 1, 15, 16, and 30 are independent. Claims 10-11 and 25-26 are deemed to recite allowable subject matter. No additional fees are believed to be due in connection with the filing of this response. However, to the extent fees are due, or if a refund is forthcoming, please adjust our deposit account 06-1050.

Respectfully submitted,

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